



**BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT**

Wildfire Rule Amendments Public Workshop

**Regulation 5: Open Burning
and**

**Regulation 6: Particulate Matter and Visible Emissions,
Rule 3: Wood-Burning Devices**

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Supervising Air Quality Specialist
July 24, 2019**

Agenda

- **Catastrophic Wildfires**
- **Wildfire Smoke**
 - *Local and Regional Impacts*
 - *Wildfire Smoke Composition*
 - *Health Effects of PM_{2.5}*
- **Wildfire Air Quality Response Program**
- **Proposed Draft Amendments**
 - *Regulation 5: Open Burning*
 - *Rule 6-3: Wood-Burning Devices*
- **Rule Development Schedule**
- **Questions**

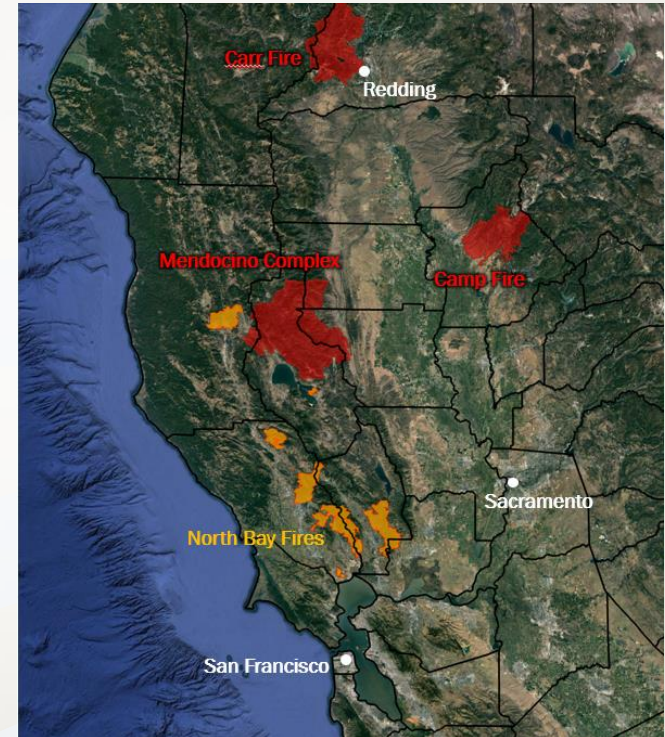
Catastrophic Wildfires

Wildfires – The “New Normal”

- October 2017 Sonoma & Napa Fires (North Bay Fires)
- November 2018 Camp Fire in Butte County

Wildfire State of Emergency

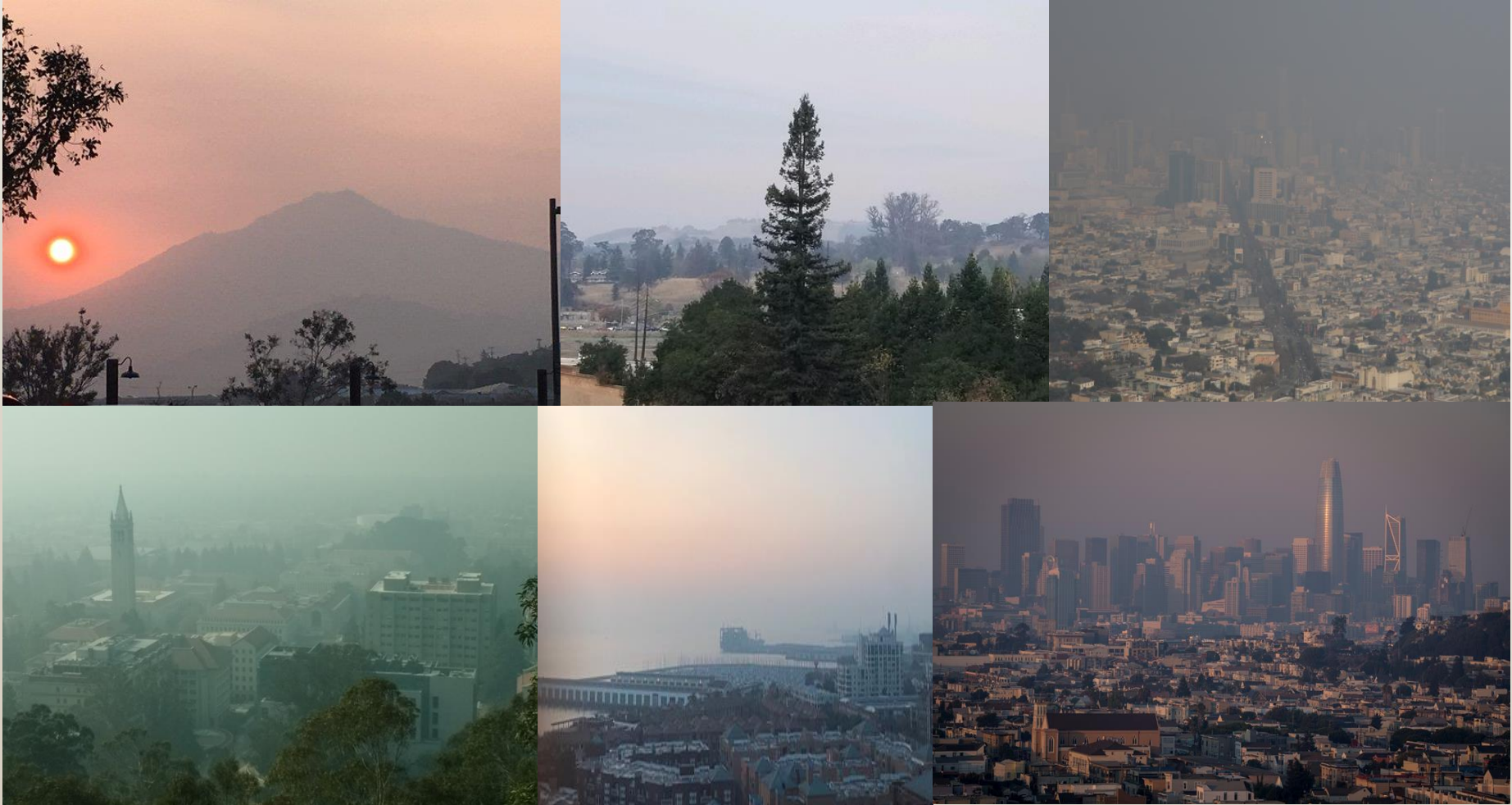
- Increasing fire risk
- Imminent threat to air quality and public health



California North Bay wildfires:

Wildfire Smoke

Local and Regional Impacts

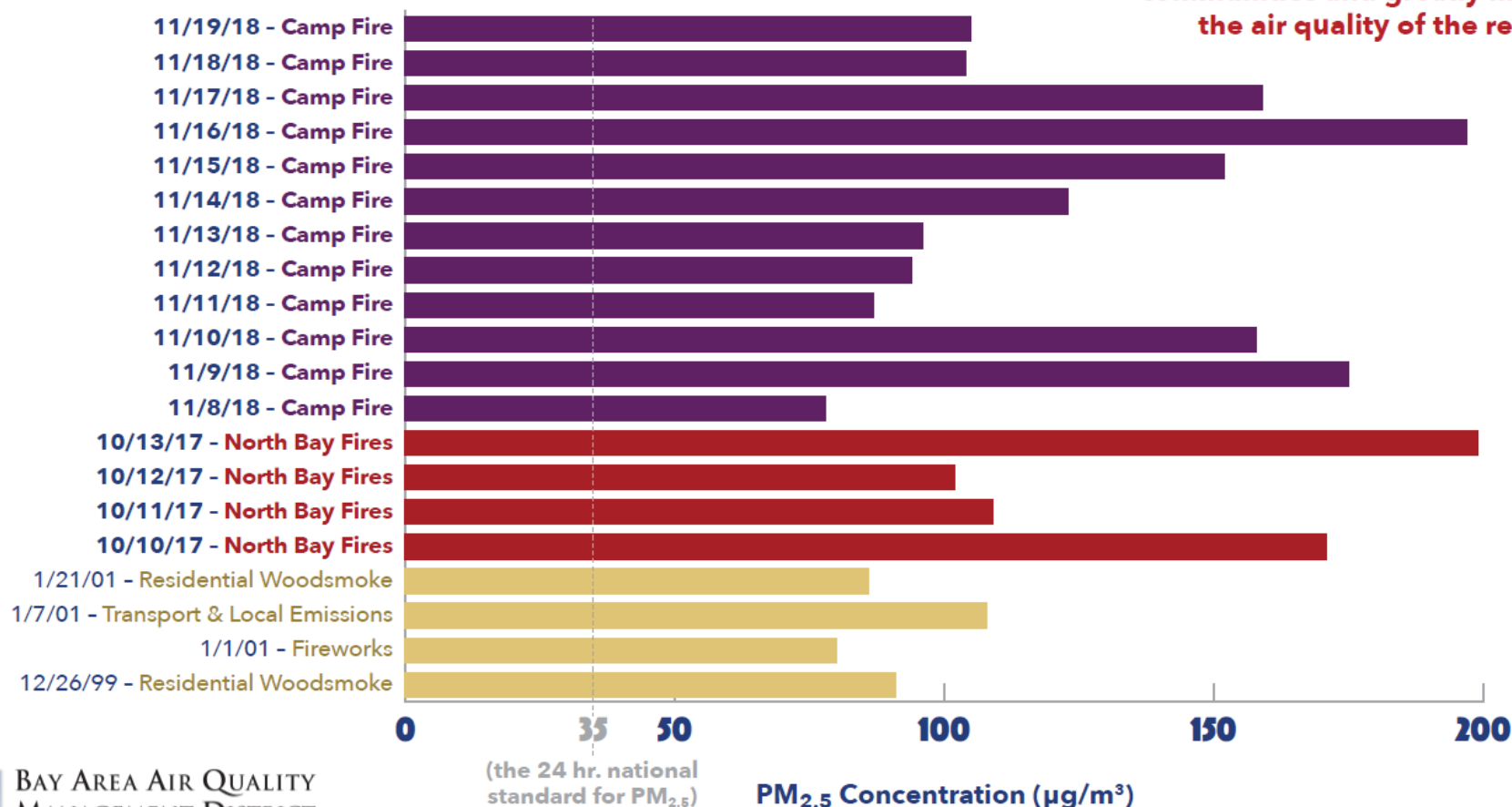


Top 20 PM_{2.5} Days

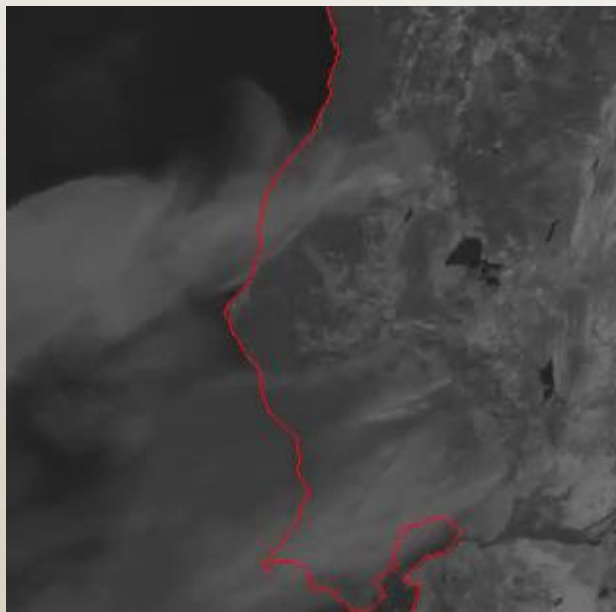
20 HIGHEST BAY AREA PARTICULATE POLLUTION DAYS SINCE 1999

WILDFIRES

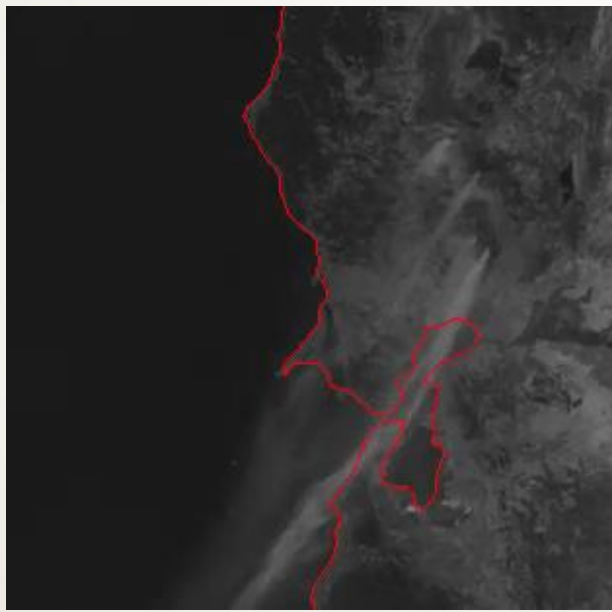
are increasingly devastating for our communities and greatly impact the air quality of the region.



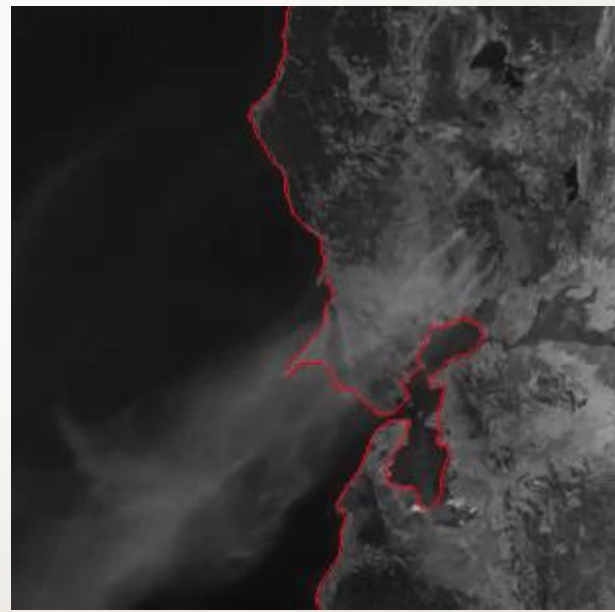
North Bay Fires – October 2017



Monday 10/09/2017



Thursday 10/12/2017



Saturday 10/14/2017

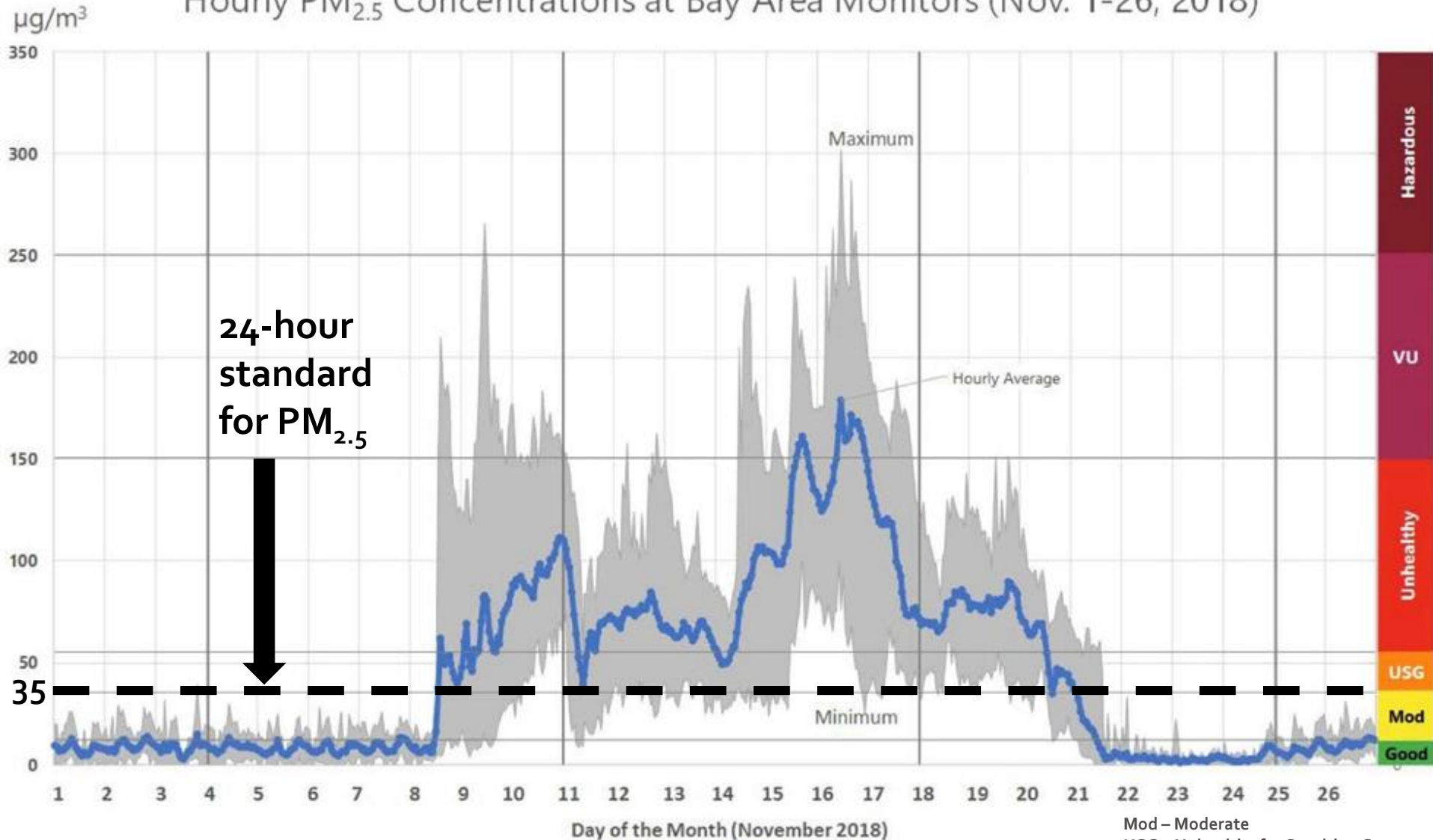
Geostationary Operational Environmental Satellite 16 (GOES-16)

Camp Fire – November 1, 2018



PM_{2.5} Hourly Concentrations (Camp Fire)

Hourly PM_{2.5} Concentrations at Bay Area Monitors (Nov. 1-26, 2018)



Dark vertical lines are Sundays.

Mod – Moderate
USG – Unhealthy for Sensitive Groups
VU – Very Unhealthy

Impacts on Daily 24-Hour Average Air Quality Index (AQI)

AQI values during Camp Fire

AQI Key

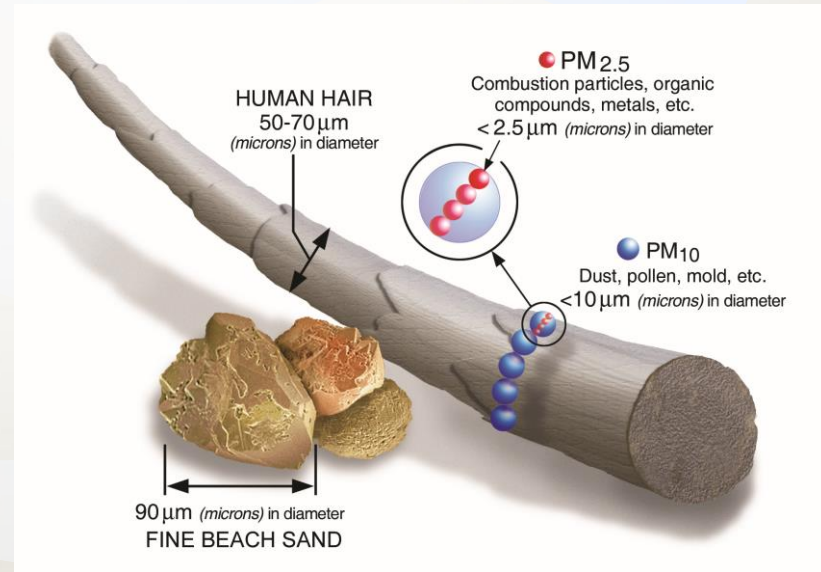
Air Quality Index (AQI) Values	Levels of Health Concern
0-50	Good
51-100	Moderate
101-150	Unhealthy for Sensitive Groups
151-200	Unhealthy
201-300	Very Unhealthy
301-500	Hazardous

	Nov. 11	Nov. 12	Nov. 13	Nov. 14	Nov. 15	Nov. 16	Nov. 17
Northern Zone	165	171	172	166	186	247	186
Coast & Central Bay	167	167	164	173	203	245	184
Eastern Zone	159	162	151	186	193	223	210
South Central Bay	152	159	142	157	185	183	159
Santa Clara Valley	153	155	153	164	191	190	169

Wildfire Smoke

Wildfire Smoke Composition

- Fine particulates
- Mixture of various organic and inorganic gases
- Combustion products of vegetation
- Chemicals from burning structures and vehicles
 - Metals – lead, chromium, arsenic, copper, mercury
 - Plastics - Polycyclic aromatic hydrocarbons
 - Insulation – Asbestos, Fiberglass



Wildfire Smoke

Health Effects of PM_{2.5}

WILDFIRE POLLUTION **HARMS HEALTH**

Asthma attacks,
breathing problems

Premature
death

Eye, lung,
throat irritation

Heart disease
effects
worsened



Wildfire Air Quality Response Program

Program intended to prepare, prevent, and respond to future wildfires, and ensure health-protective measures and strategies are in place during wildfire smoke events.

Five Strategic Elements

- **Regulatory Efforts**
- Legislative Initiatives
- Grants and Incentives
- Partnerships and Regional Alliance
- Community Resources

Reg 5: Open Burning

Purpose of Reg 5 Rule Amendments

Support and complement statewide efforts to prevent large, catastrophic wildfires through fuel reductions by prescribed burning

Reg 5: Open Burning (Current Rule)

- Open burning (outdoor fires) is generally **prohibited**
- Most fires are not allowed
- Exceptions:
 - 17 Allowable Fire Types on designated permissive burn days when meteorological conditions are favorable for smoke dispersion
 - Recreational Fires

Reg 5: Open Burning

Prescribed Burning

- Planned, controlled burning of vegetation to achieve natural resource management goals
- Designed to burn less intensely than wildfires and are lit under controlled conditions to minimize potential smoke impacts
- Necessary to promote ecosystem health and lower the likelihood that severe wildfires will occur
- Regulated by the Air District

Slide 16



Reg 5: Open Burning Proposed Amendments

Reg 5 Draft Amendments: Exemptions

- NEW Limited Exemption: Public Agency Wildfire Prevention (Section 113)
 - Any public agency conducting a prescribed burn for the purpose of wildfire prevention is exempt from the Open Burn Fees.

Reg 5 Draft Amendments: Definitions

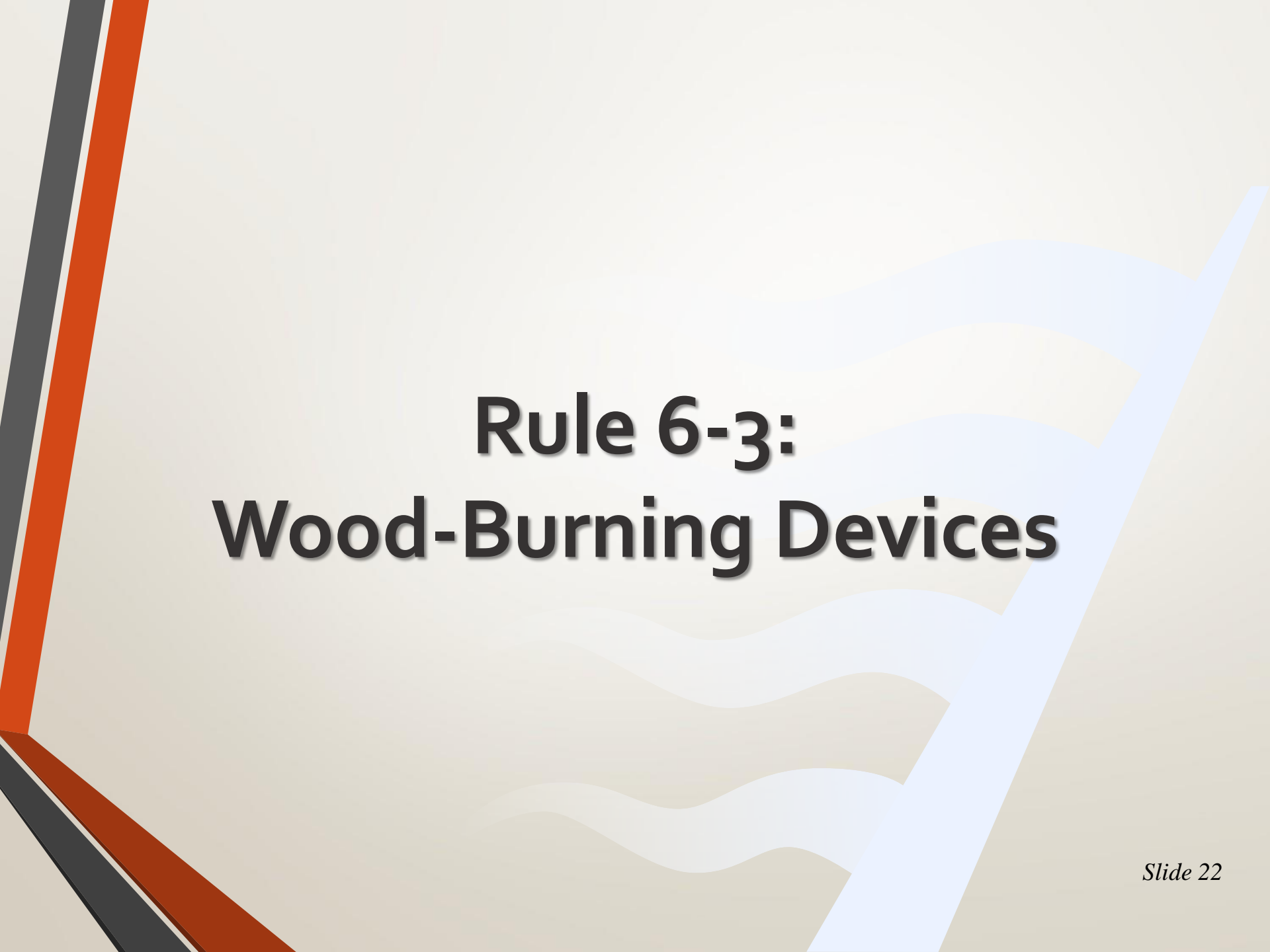
- Mandatory Burn Ban (Section 223)
 - Rename from “Curtailment Period”
- NEW Public Agency (Section 225)
 - Any agency, political subdivision, or unit of local, state or federal government

Reg 5 Draft Amendments: Standards

- Mandatory Burn Ban for Recreational Fires (Section 302)
 - Rename from “Mandatory Curtailment for Recreational Fires”

Reg 5 Draft Amendments: Administrative Requirements

- Allowable Fires: Wildland Management (Section 401.15)
 - Change “state or federal agency” to “public agency”
- Open Burning Operation Fees (Section 411)
 - Payment of fees required prior to burning

The background features a light beige color with several wavy, horizontal bands in shades of light blue and cream. On the left side, there are diagonal stripes in dark grey, orange, and dark red. A large, light blue diagonal shape cuts across the right side of the slide.

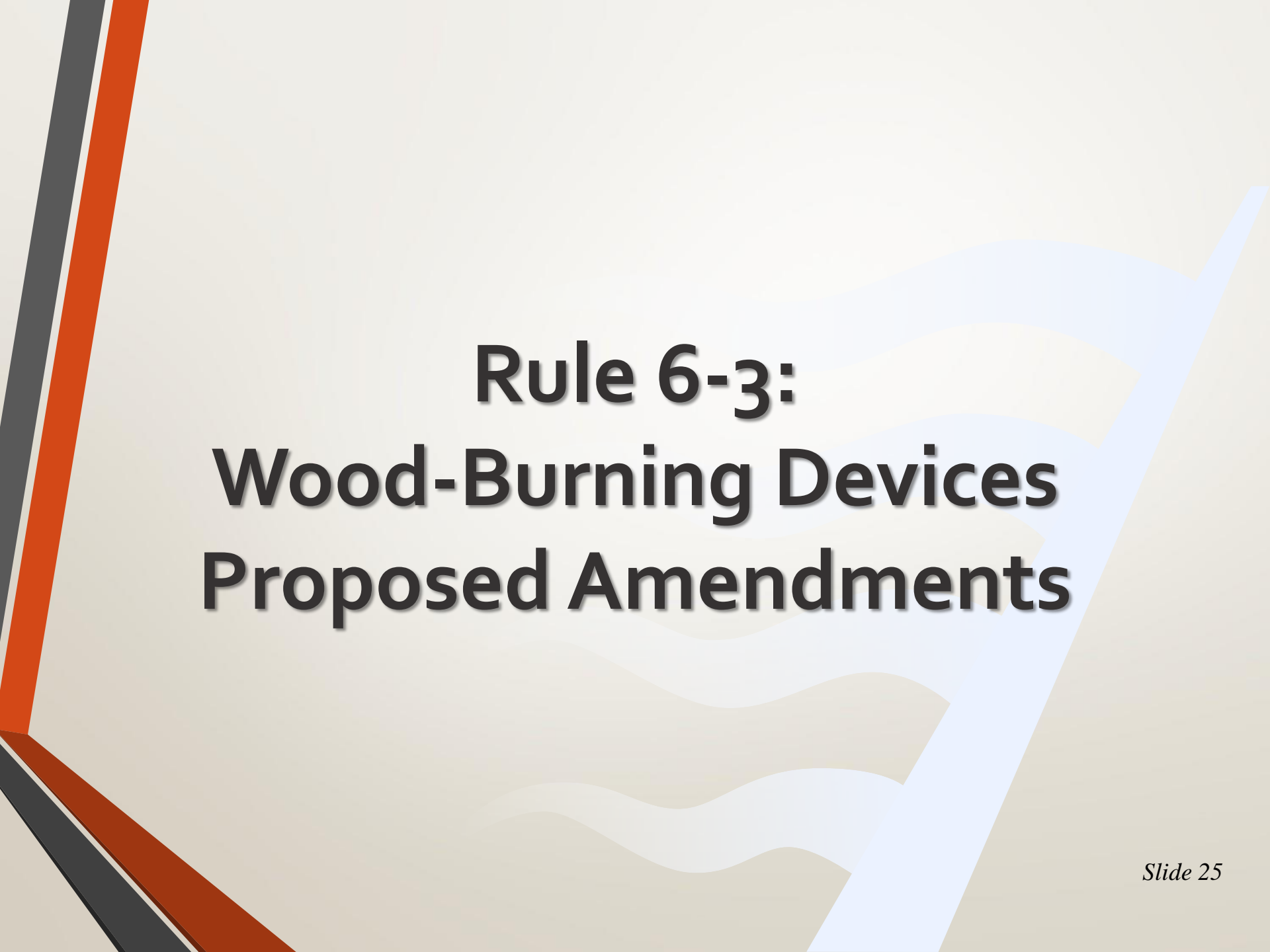
Rule 6-3: Wood-Burning Devices

Purpose of Rule 6-3 Amendments

- Protect public health year-round
- Prohibit wood burning throughout the year whenever particulate matter concentrations are forecasted to exceed $35 \mu\text{g}/\text{m}^3$
- Enhance enforceability of rule to discourage wood-burning activities when wildfire smoke impacts the region

Rule 6-3: Wood-Burning Devices (Current Rule)

- Limits emissions of particulate matter and visible emissions from wood-burning devices used for primary heat, supplemental heat or ambiance
- November through February
- Issue a “Winter Spare the Air Alert”
- Prohibits wood burning when air quality is forecasted to exceed $35 \mu\text{g}/\text{m}^3$



Rule 6-3: Wood-Burning Devices Proposed Amendments

Rule 6-3 Draft Amendments: Definitions

- Mandatory Burn Ban (Section 211)
 - Adds reference to 24-hr $\text{PM}_{2.5}$ national standard
 - Change to “Spare the Air Alert”
- Spare the Air Alert (Section 224)
 - Rename to “Spare the Air Alert” by removing “winter”
 - Removes reference to 24-hr $\text{PM}_{2.5}$ national standard
- Winter Spare the Air Season (Section 228)
 - Deletes definition

Rule 6-3 Draft Amendments: Standards

- Burning Prohibited During Mandatory Burn Ban (Section 301)
 - Prohibit wood burning when air quality is forecasted to be unhealthy
 - Applicable year-round
 - *No changes to the existing Limited Exemptions*

Bay Area PM_{2.5} Exceedances 2015-2019

Year	Days >35 µg/m ³ due to Wildfires (PM _{2.5})	Wintertime Days >35 µg/m ³ (PM _{2.5})	Total Days >35 µg/m ³ (PM _{2.5})
2015	3	6	9
2016	0	0	0
2017	14	4	18
2018	16	4	20
2019	0	0	0

Next Steps

- Draft Amendments and Workshop Report posted to baaqmd.gov on July 1, 2019
- Comment Period ends August 12, 2019
- Consideration of Comments
- Socio-economic and CEQA analyses
- Board Hearing in 4th quarter 2019

Submit comments to:

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